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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
| 10/606,790 | 06/27/2003 | Quen-Zong Wu | ASI 125 | 5018 |
| 7590 RABIN & BERDO, P.C. Suite 500 1101 14th Street Washington, DC 20005 | | | EXAMINER ROBINSON BOYCE, AKIBA K | |
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| SHORTENED STATUTORY PERIOD OF RESPONSE | | MAIL DATE | DELIVERY MODE | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/606,790

Applicant(s)

WU ET AL.

Examiner

Akiba K. Robinson-Boyce

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 February 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☒ Claim(s) 1 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Status of Claims

1. Due to communications filed 2/2/07, the following is a final office action. Claims 1-3 and 6 have been amended. Claims 1-6 are pending in this application and have been examined on the merits. Claims 1-6 are rejected as follows.

Claim Objections

2. Claim 1 is objected to because of the following informalities: the word "system" is repeated twice in a row. Appropriate correction is required.

Terminal Disclaimer

3. The terminal disclaimer filed on 2/2/07 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of 3/16/04 has been reviewed and is NOT accepted.

An attorney or agent, not of record, is not authorized to sign a terminal disclaimer in the capacity as an attorney or agent acting in a representative capacity as provided by 37 CFR 1.34 (a). See 37 CFR 1.321(b) and/or (c).

Double Patenting

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct

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from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1, 3 and 6 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 2 and 7 of U.S. Patent No. 6,705,521. Although the conflicting claims are not identical, they are not patentably distinct from each other because both sets of claims disclose an automatic car toll paying method that employs cellular communications to enable automatic billing for tolls.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Freeny (US 2002/0188575 A1).

As per claim 1, Freeny discloses:

calling a specific log number representing a log in of an automatic charging system through an on-vehicle cellular phone before a car enters a toll road or bridge and hanging up, [0028], shows communication call charges to a billing data processing center, w/ [0030], shows entry of phone numbers/personal information codes for use with proximity service features , where the toll gate is the proximity service); and

calling a specific log out number representing a log out of said automatic charging system through said on-vehicle cellular phone after said car leaves said toll road or bridge, ([0045], shows an example of a grocery store, but is obvious to use in a toll booth application since the AWP system is used for both applications, where the product code is entered at the checkout station representing completion of the user's transaction. In the case of a toll booth, the product code would be replaced with phone numbers/personal information codes entered into the AWP for checkout of a vehicle);

wherein said on-vehicle cellular phone having been logged in to said automatic charging system system prior to said car entering a cell governing

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area of a communication coverage covering a toll station, a cellular base station informing a billing center to automatically chargeback from an account connected to said on-vehicle cellular phone or record a toll of said car, [0048], lines 1-12, shows use of AWP (Advance Wireless Phone/Pager) unit with a toll booth, where the personal information code is transferred to the toll booth for automatic accounting of the toll both charges).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to use the toll booth application in a checkout station scenario with the motivation of utilizing the AWP system to ensure that the toll payment is complete.

7. Claims 2, 3, 4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Freeny (US 2002/0188575 A1), and further in view of Claus et al (US 5,310,999).

As per claim 2, Freeny does not specifically disclose the following, but does disclose completing a toll booth payment in [0048].

However, Claus et al discloses:

said billing center transmitting a successful-payment message to said on-vehicle cellular phone through said cellular base station to be an electronic toll payment authorization if said account or said record is completed, (Col. 8 lines 43-55, successful transaction concludes with a yellow light of a transponder turning off based on the information in a decrypted message). Claus et al discloses this limitation in an analogous art for the purpose of showing that upon successful debiting of a smart card, indication of a successful transaction is made).

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It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to transmit a successful-payment message with the motivation of providing an indication that the vehicle has successfully paid the toll.

As per claim 3, Freeny does not specifically disclose the following, but does disclose completing a toll booth payment in [0048].

However, Claus et al discloses:

wherein said toll road or bridge further comprises an inspection location having one or more automatic photographing devices for recognizing a license plate, and when said car passes through said inspection location, transmitting said electronic toll payment authorization to a short wireless signal receiving device in said inspection location through an on-vehicle wireless DSRC (Dedicated Short Range Communication) transmitter, and if said electronic toll payment authorization is not transmitted to said inspection location by said car, recognizing said license plate of said car by said one or more automatic photographing devices, whereby an image representing said car passing said inspection location and a vehicle identification number of said car will be evidence for processing said toll, (Col. 4, line 67-Col. 5, line 1, shows use of camera taking a picture of a license plate). Claus et al discloses this limitation in an analogous art for the purpose of determining if a vehicle made a proper payment.

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to transmit a successful-payment message with the motivation of providing an indication that the vehicle has successfully paid the toll.

As per claim 4, Freeny discloses:

wherein said on-vehicle wireless DSRC (Dedicated Short Range Communication) transmitter and said short wireless signal receiving device are microwave communication media, ([0005], shows use with microwave systems).

As per claim 6, neither Freeny discloses:

wherein said on-vehicle cellular communication equipment employing at least one hot key to call said specific log in number representing said log in of said automatic charging system or said specific log out number representing said log out of said automatic charging system, ([0051]-[0052], shows user uses the AWP to select a local telephone code for dialing, it shows telephone codes stored in memory of a computer program telephone dialing system, where once the AWP unit is located, the stored number, along with a predetermined prefix, such as the number one and area code are dialed, in this case, the actual "hot key" is obvious with Freeny since the user uses the AWP, which has key selections to dial a specific number stored for payment purposes).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to employ a hot key conveniently to call said specific number with the motivation of allowing a user to quickly dial a specific number for processing the toll payment.

8. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Freeny (US 2002/0188575 A1), and further in view of Claus et al (US 5,310,999), and further in view of Schofield et al (US 2006/0220817 A1).

As per claim 5, neither Freeny, nor Claus et al disclose the following, however, Freeny shows use of AWP (Advance Wireless Phone/Pager) unit in a toll booth application in [0048], lines 1-12.

However, Schofield et al discloses:

wherein said on-vehicle wireless DSRC (Dedicated Short Range Communication) transmitter and said short wireless signal receiving device are infrared communication media, ([0113], infrared communications). Schofield et al discloses this limitation in an analogous art for the purpose of showing that infrared communications are used with an automated vehicle system.

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to utilize infrared communication media with the motivation of providing means that will communicate effectively in the toll system.

Response to Arguments

9. Applicant's arguments filed 2/2/07 have been fully considered but they are not persuasive.

As per claims 1, 3 and 6, applicant argues that the rejection is traversed and overcome by a Terminal Disclaimer. However, the Terminal disclaimer is not accepted by the examiner and is objected as shown above in paragraph 2.

As per claim 1, applicant argues that Freeny Jr. Only teaches communicating billing charges via telephone, not logging in and out by calling a specific number when respectively entering and leaving a toll road or bridge. However, in [0030], Freeny Jr. shows entry of phone numbers/personal information codes for use with proximity

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service features , where the toll gate is the proximity service. In this case, the phone numbers/personal information codes are used when entering the toll gate and therefore represents the log in numbers. In addition, in [0045], an example of a grocery store is shown, where the product code is entered at the checkout station representing completion of the user's transaction. In this case, a toll booth application being applied to this product code entry example is obvious since the AWP system is used for both types of applications. However, in the case of a toll booth, the product code would be replaced with phone numbers/personal information codes entered into the AWP for checkout of a vehicle, and would represent the log out numbers. Applicant also argues that Freeny, Jr. Fails to disclose logging in, hanging up, then logging out. However, since entry and exiting a toll booth are two different transactions, it is obvious that the log in connection must be disconnected before the log out connection is processed, thereby meaning that the phone must be hung up in order to process the log out transaction.

Claims 2-6 depend form claim 1 and are therefore rejected for the same reasons.

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Akiba K Robinson-Boyce whose telephone number is 571-272-6734. The examiner can normally be reached on Monday-Friday 9am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Hayes can be reached on 571-272-6708. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-7238 [After final communications, labeled "Box AF"], 703-746-7239 [Official Communications], and 703-746-7150 [Informal/Draft Communications, labeled "PROPOSED" or "DRAFT"].

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

A handwritten signature in black ink, appearing to read 'Akiba K Robinson-Boyce', written in a cursive style.

A. R. B.
April 16, 2007